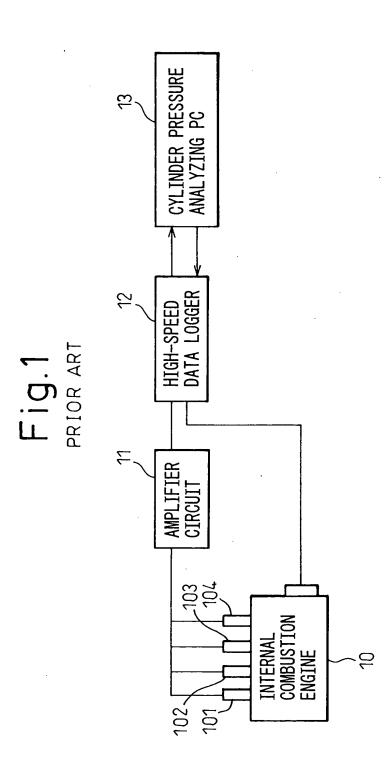
Attorney: D. Bruce Prout Docket No.: 51454/DBP/A400 Inventor(s): Koji Fukuoka, et al. Title: KNOCK DETECTION DEVICE

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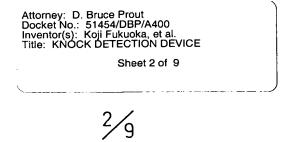
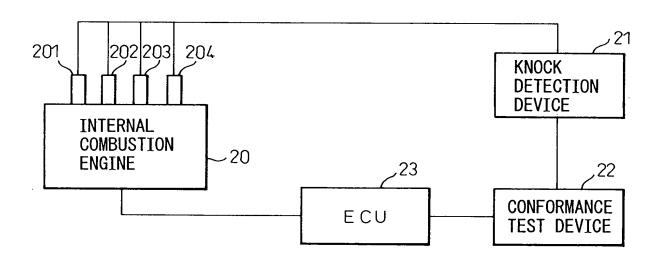


Fig.2



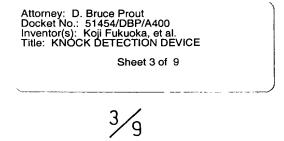
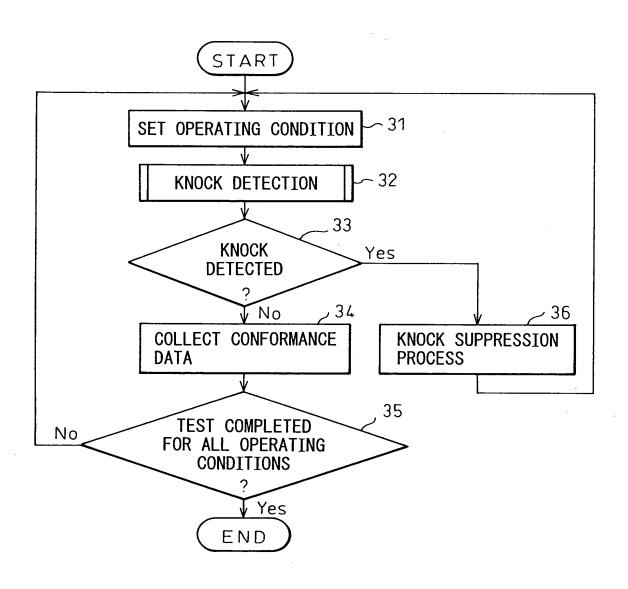


Fig.3

CONFORMANCE TEST ROUTINE



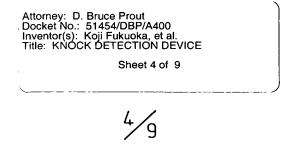
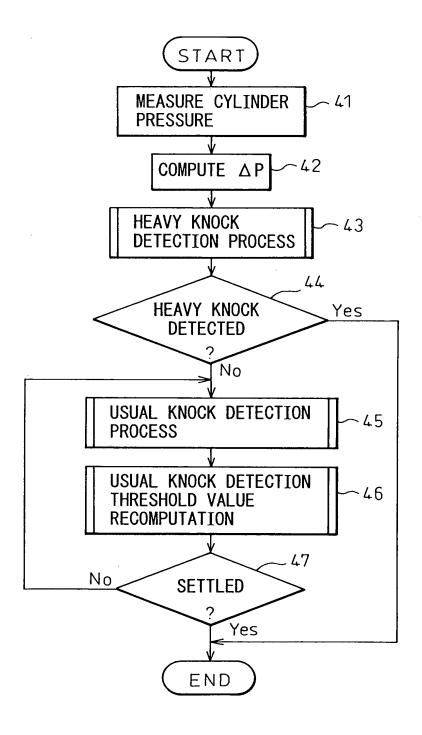
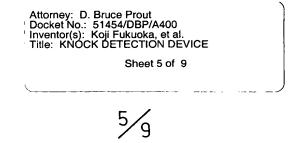
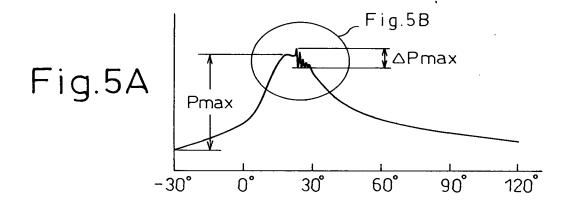


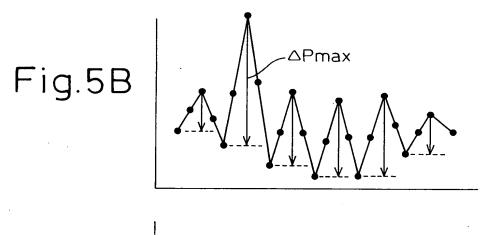
Fig. 4

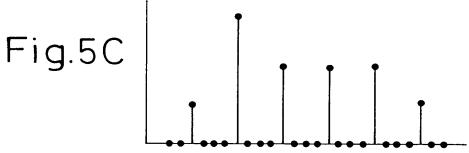
FIRST KNOCK DETECTION PROCESS







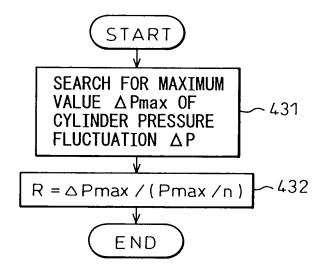




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Fig.6

HEAVY KNOCK DETECTION PROCESS



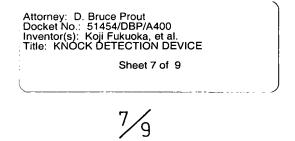
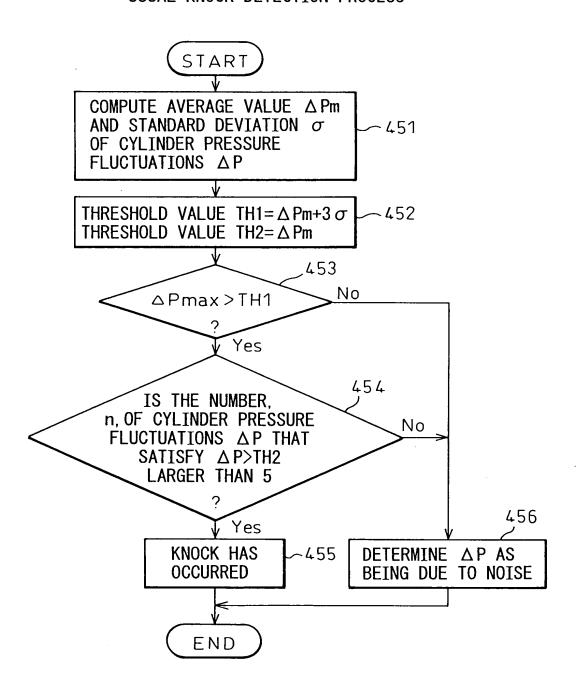


Fig.7

USUAL KNOCK DETECTION PROCESS



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Fig.8

USUAL KNOCK DETECTION THRESHOLD VALUE RECOMPUTATION PROCESS

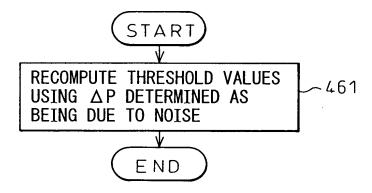
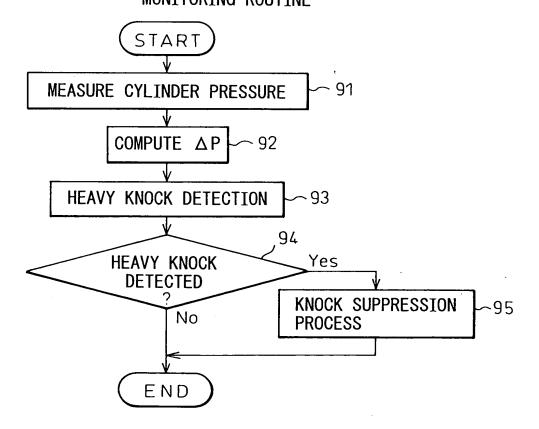


Fig.9
HEAVY KNOCK OCCURRENCE
MONITORING ROUTINE



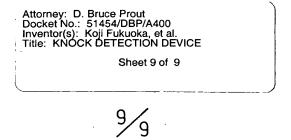


Fig.10

SECOND KNOCK DETECTION PROCESS

